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# SUMMARY OF COMMON PROGRAMS

## OVERVIEW

The mission of the CALFED Bay-Delta Program is to develop a long-term comprehensive plan to restore ecosystem health and improve water management for beneficial uses of the Bay-Delta system. The Program addresses problems in four resource areas: ecosystem quality, water quality, water supply reliability, and levee system integrity. Programs to address problems in these four resource areas are designed and integrated to fulfill the CALFED mission.

The CALFED Bay-Delta Program has developed three alternative descriptions for evaluation in Phase II of the Program. The alternatives represent a broad range of potential solutions to problems in the Bay-Delta system. The foundation of each alternative is a set of four common programs that remain relatively constant between alternatives. Each of the three alternatives also includes a variety of potential modification combinations for water conveyance and for storage.

This report focuses on the four common programs. It also includes the basic facility operation assumptions that remain relatively constant between alternatives. The four common programs for each alternative include:

- **Ecosystem Restoration** - Provides for habitat improvements and reduction of stressors throughout the Bay-Delta system
- **Water Quality** - Provides for improved water quality for all uses primarily by reducing pollutant loads entering the Bay-Delta system and managing input timing of remaining pollutants
- **Water Use Efficiency** - Provides policies for implementation of cost effective measures to improve water use efficiency and water transfers
- **Levee System Integrity** - Provides levee improvements throughout the Delta

The common programs each contribute in multiple ways toward achieving the CALFED Program mission and goals. These contributions to the four Program goals are summarized in the following paragraphs:

*Ecosystem Quality - The goal for ecosystem quality is to improve and increase aquatic and terrestrial habitats and improve ecological functions in the Bay-Delta to support sustainable populations of diverse and valuable plant and animal species. The ecosystem restoration program provides for significant habitat improvements for species dependent on the Delta and reduces the effects of stressors (such as unscreened diversions) that inhibit ecological processes, habitats, and species.*

Improvements from other common programs will also improve and increase habitats. The water quality program would reduce those water quality stressors that affect aquatic species by reducing water quality parameters of concern before they enter the waterways of the Bay-Delta system. The water use efficiency program combined with changes in facility operations may allow some shifting of water diversion timing to reduce impacts on fisheries. Levee improvements would provide some opportunities for new habitat.

*Water Quality - The goal for water quality in the Bay-Delta system is to provide good water quality for all beneficial uses.* The water quality program would improve water quality by reducing water quality parameters of concern before they enter the Bay-Delta system waterway. New aquatic habitat restoration may provide some natural bio-treatment to improve water quality. New storage and new flexibility in diversion timing would provide additional opportunities for water management and timing to improve water quality for all beneficial uses.

*Water Supply Reliability - The goal for water supply reliability is to reduce the mismatch between Bay-Delta water supplies and current and projected beneficial uses dependent on the Bay-Delta system.* Water supply reliability would be improved through policies for implementing cost effective measures to improve water use efficiency, water transfers, and groundwater management. Improvements in levee system integrity should reduce the probability that water diversions would be interrupted by levee failure. Improvements in ecosystem quality should lead to healthier species populations, reduced constraints on water diversions and associated improvements in water supply reliability.

*System Vulnerability - The goal for addressing Bay-Delta system vulnerability is to reduce the risk to land use and associated economic activities, water supply, infrastructure, and the ecosystem from catastrophic breaching of Delta levees.* Levee improvements would initially protect western Delta islands that are critical for water quality, population centers, and valuable habitats. Levee Improvements would continue until an acceptable higher level of protection is provided throughout the Delta. Where possible levee rehabilitation would incorporate habitat improvements that simultaneously reduce system vulnerability, increase ecosystem quality, and improve water quality.